

PENDING CLAIMS
Application No. 11/019,382
Attorney Docket No. 05725.1378-00000
Filed: December 23, 2004

1. A composition comprising

i) at least one liquid fatty phase,

ii) at least one first polymer comprising

a) a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one heteroatom, and

b) at least one of:

- at least one terminal fatty chain chosen from alkyl chains and alkenyl chains, wherein the at least one terminal fatty chain is bonded to the polymer skeleton via at least one ester linking group; and
- at least one pendant fatty chain chosen from alkyl chains and alkenyl chains, wherein the at least one pendant fatty chain is bonded to the polymer skeleton via at least one ester linking group, and

iii) at least one second polymer, different from the first polymer,

comprising

a) a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one heteroatom, and

b) at least one of:

- at least one terminal fatty chain chosen from alkyl chains and alkenyl chains, wherein the at least one terminal fatty

chain is bonded to the polymer skeleton via at least one amide linking group; and

- at least one pendant fatty chain chosen from alkyl chains and alkenyl chains, wherein the at least one pendant fatty chain is bonded to the polymer skeleton via at least one amide linking group,

wherein the second polymer does not comprise an ester linking group.

2. A composition according to claim 1, wherein the at least one first polymer further comprises at least one of:

- at least one terminal fatty chain chosen from alkyl chains and alkenyl chains, wherein the at least one terminal fatty chain is bonded to the polymer skeleton via at least one linking group; and

- at least one pendant fatty chain chosen from alkyl chains and alkenyl chains, wherein the at least one pendant fatty chain is bonded to the polymer skeleton via at least one linking group.

3. A cosmetic composition comprising

- i) at least one liquid fatty phase,
- ii) at least one first polymer comprising

- a) a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one heteroatom, and

- b) at least one of:

|

- at least one terminal fatty chain chosen from alkyl chains and alkenyl chains, wherein the at least one terminal fatty chain is bonded to the polymer skeleton via at least one linking group; and

- at least one pendant fatty chain chosen from alkyl chains and alkenyl chains, wherein the at least one pendant fatty chain is bonded to the polymer skeleton via at least one linking group,

wherein the at least one first polymer and the at least one second polymer are each present in a sufficient amount to render the composition stable, and

wherein the at least one liquid fatty phase is structured by at least one of the at least one first polymer and the at least one second polymer.

4. The composition according to claim 1, wherein the at least one first polymer or at least one second polymer comprises at least one polyamide block or is a polyamide polymer.

5. The composition according to claim 1, wherein the at least one first polymer or at least one second polymer comprises at least one terminal fatty chain.

6. The composition according to claim 5, wherein the at least one terminal fatty chain is chosen from alkyl chains and alkenyl chains, each comprising at least four carbon atoms.

7. The composition according to claim 6, wherein the alkyl chains and the alkenyl chains each comprise from 12 to 68 carbon atoms.

8. The composition according to claim 1, wherein the at least one linking group of the at least one first polymer is an ester group present in a proportion ranging from 15% to 40% of the total number of all ester and heteroatom groups in the at least one first polymer.

9. The composition according to claim 1, wherein the at least one linking group of the at least one first polymer is an ester group present in a proportion ranging from 20% to 35% of the total number of all ester and heteroatom groups in the at least one first polymer.

10. The composition according to claim 1, wherein in the at least one first polymer, the percentage of the total number of fatty chains ranges from 40% to 98% relative to the total number of all repeating units and fatty chains in the at least one first polymer.

11. The composition according to claim 1, wherein in the at least one first polymer, the percentage of the total number of fatty chains ranges from 50% to 95% relative to the total number of all repeating units and fatty chains in the at least one first polymer.

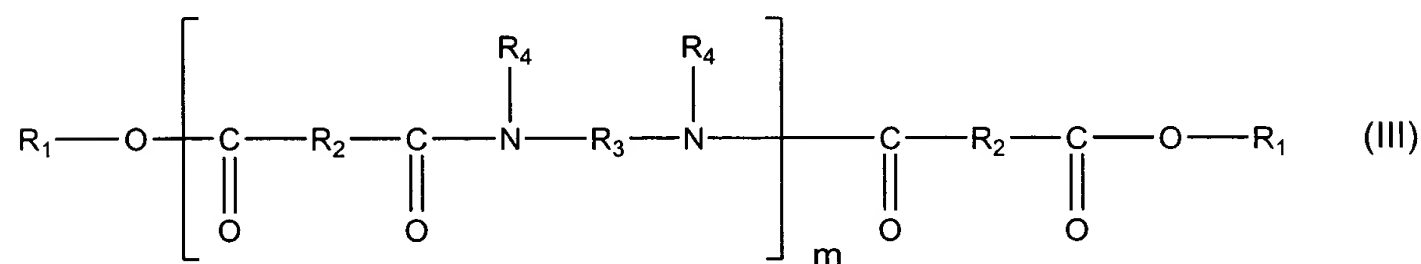
12. The composition according to claim 1, wherein the at least one hydrocarbon- based repeating unit of the first polymer comprises from 2 to 80 carbon atoms.

13. The composition according to claim 1, wherein the at least one heteroatom of the at least one hydrocarbon-based repeating unit of the at least one first polymer is chosen from nitrogen, sulfur, and phosphorus.

14. The composition according to claim 13, wherein the at least one heteroatom is a nitrogen atom.

15. The composition according to claim 1, wherein the at least one heteroatom of the at least one first polymer, taken together with at least one oxygen atom, forms an amide group.

16. The composition according to claim 1, wherein the at least one first polymer is chosen from polyamide polymers of formula (III):



wherein:

- m is an integer which represents the number of amide units such that the number of ester groups present in the at least one polyamide polymer ranges from 10% to 50% of the total number of all the ester groups and all the amide groups comprised in the at least one polyamide polymer;

- R₁, which are identical or different, are each independently chosen from alkyl groups comprising at least 4 carbon atoms and alkenyl groups comprising at least 4 carbon atoms;

|

- R₂, which are identical or different, are each independently chosen from C₄ to C₄₂ hydrocarbon-based groups, with the proviso that at least 50% of all R₂ groups are chosen from C₃₀ to C₄₂ hydrocarbon-based groups;

- R₃, which may be identical or different, are each independently chosen from organic groups comprising at least two carbon atoms, in addition to hydrogen atoms, and optionally comprising at least one atom chosen from oxygen atoms and nitrogen atoms; and

- R₄, which are identical or different, are each independently chosen from hydrogen atoms, C₁ to C₁₀ alkyl groups and a direct bond to at least one group chosen from R₃ and another R₄ such that when the at least one group is chosen from another R₄, the nitrogen atom to which both R₃ and R₄ are bonded forms part of a heterocyclic structure defined in part by R₄-N-R₃, with the proviso that at least 50% of all R₄ are chosen from hydrogen atoms.

17. The composition according to claim 16, wherein m is an integer ranging from 1 to 5.

18. The composition according to claim 16, wherein R₁, which are identical or different, are each chosen from C₁₆ to C₂₂ alkyl groups.

19. The composition according to claim 16, wherein R₂, which are identical or different, are each chosen from C₁₀ to C₄₂ hydrocarbon based groups, with the proviso that at least 50% of all R₂ are chosen from C₃₀ to C₄₂ hydrocarbon based groups.

20. The composition according to claim 16, wherein R₃, which are identical or different, are each chosen from C₂ to C₁₂ hydrocarbon-based groups.

21. The composition according to claim 16, wherein R_4 , which are identical or different, are each chosen from hydrogen atoms.

22. The composition according to claim 1, wherein the at least one first polymer has a weight-average molecular mass ranging from 1000 to 30,000.

23. The composition according to claim 1, wherein the at least one first polymer has a softening point greater than 50 °C and less than 150 °C.

24. The composition according to claim 1, wherein the at least one first polymer is present in the composition in an amount ranging from 0.5% to 80% by weight relative to the total weight of the composition.

25. The composition according to claim 1, wherein the at least one second polymer is a resin composition prepared by reacting components comprising dibasic acid, diamine, polyol and monoalcohol, wherein:

i) at least 50 equivalent percent of the dibasic acid comprises polymerized fatty acid;

ii) at least 50 equivalent percent of the diamine comprises ethylenediamine;

iii) 10 to 60 equivalent percent of the total of the hydroxyl and amine equivalents provided by diamine, polyol and monoalcohol are provided by monoalcohol; and

iv) no more than 50 equivalent percent of the total of the hydroxyl and amine equivalents provided by diamine, polyol and monoalcohol are provided by polyol.

26. The composition of claim 25, wherein polymerized fatty acid comprises at least 75 equivalent percent of the acid equivalents of the dibasic acid.

27. The composition of claim 25, wherein polymerized fatty acid comprises at least 90 equivalent percent of the acid equivalents of the dibasic acid.

28. The composition of claim 25, wherein ethylenediamine comprises at least 75 equivalent percent of the amine equivalents from diamine.

29. The composition of claim 25, wherein polymerized fatty acid comprises at least 75 equivalent percent of the acid equivalents of the dibasic acid, and ethylenediamine comprises at least 75 equivalent percent of the amine equivalents of diamine.

30. The composition of claim 25, wherein the monoalcohol reactant comprises an alcohol of the formula R_3-OH and R_3 is a hydrocarbon group.

31. The composition of claim 30, wherein R_3 is chosen from alkyl and aralkyl groups.

32. The composition of claim 25, wherein the monoalcohol is chosen from decanol, 1-dodecanol, tetradecanol, hexadecanol, octadecanol (stearyl alcohol), behenyl alcohol and linear wax alcohols comprising from 22 to 70 carbon atoms.

33. The composition of claim 25, wherein the polyol is of the formula $R_4-(OH)_n$ wherein R_4 is an n-valent organic group.

34. The composition of claim 33, wherein R_4 is a C_2-C_{20} organic group without hydroxyl substitution.

35. The composition of claim 33, wherein n is chosen from 2, 3, 4, 5 and 6.

36. The composition of claim 25, wherein the polyol is chosen from ethylene glycol, propylene glycol, butylene glycol, glycerol, trimethylolpropane, pentaerythritol, neopentyl glycol, tris(hydroxymethyl)methanol, di-pentaerythritol, and tri-pentaerythritol.

37. The composition of claim 25, wherein the amine equivalents from diamine equal 0.3 to 0.75 of the total amine and hydroxyl equivalents provided by diamine, polyol and mono-alcohol.

38. The composition of claim 25, wherein the hydroxyl equivalents from polyol equal 0.05 to 0.45 of the total amine and hydroxyl equivalents provided by diamine, polyol and mono-alcohol.

39. The composition of claim 25, wherein the hydroxyl equivalents from mono-alcohol equal 0.20 to 0.45 of the total amine and hydroxyl equivalents provided by diamine, polyol and mono-alcohol.

40. The composition of claim 25, wherein the dibasic acid reactant comprises co-diacid chosen from 1,4-cyclohexane dicarboxylic acid, isophthalic acid, adipic acid, azelaic acid, sebacic acid, and dodecandioic acid.

41. The composition of claim 25, wherein the diamine reactant comprises co-diamine chosen from 1,6-hexanediamine, xylenediamine, 1,2-propanediamine, 2-methylpentamethylenediamine, and 1,12-dodecanediamine.

42. The composition according to claim 1, wherein the at least one second polymer is a structuring polymer for the liquid fatty phase.

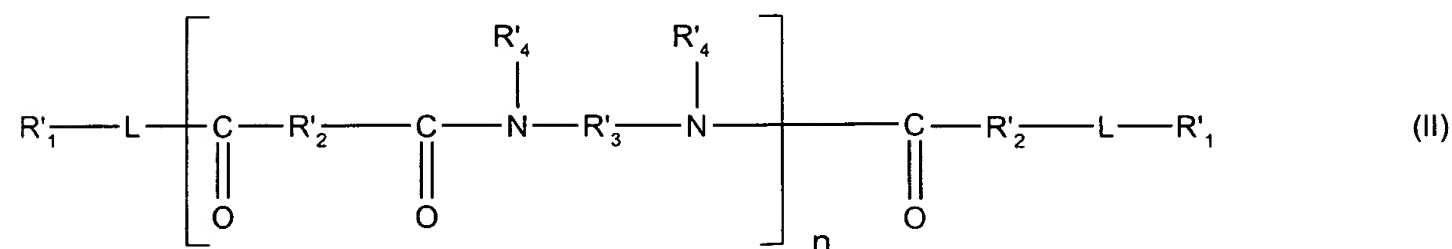
43. The composition according to claim 1, wherein the polymer skeleton of the at least one second polymer is a polyamide skeleton.

44. The composition according to claim 1, wherein the at least one second polymer comprises at least one terminal fatty chain bonded to the polymer skeleton via at least one linking group chosen from single bonds and urea, urethane, thiourea, thiourethane, thioether, thioester, ether, amide, tertiary amide or secondary amide groups.

45. The composition according to claim 44, wherein the at least one second polymer comprises at least one terminal fatty chain bonded to the polymer skeleton via at least one ether group or polyether group.

46. The composition according to claim 44, wherein the at least one second polymer comprises at least one terminal fatty chain bonded to the polymer skeleton via at least one tertiary amide group.

47. The composition according to claim 44, wherein the second polymer is chosen from polyamide polymers of formula (II)



wherein:

n is an integer from 1 to 30,

R'₁, which are identical or different, are each independently a fatty chain chosen from alkyl groups comprising at least one carbon atom and alkenyl groups comprising at least two carbon atoms;

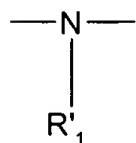
R'_2 , which are identical or different, are each independently chosen from C_1 to C_{52} hydrocarbon diradicals;

R'_3 , which may be identical or different, are each independently chosen from organic groups comprising at least two carbon atoms, in addition to hydrogen atoms, and optionally comprising at least one atom chosen from oxygen atoms and nitrogen atoms;

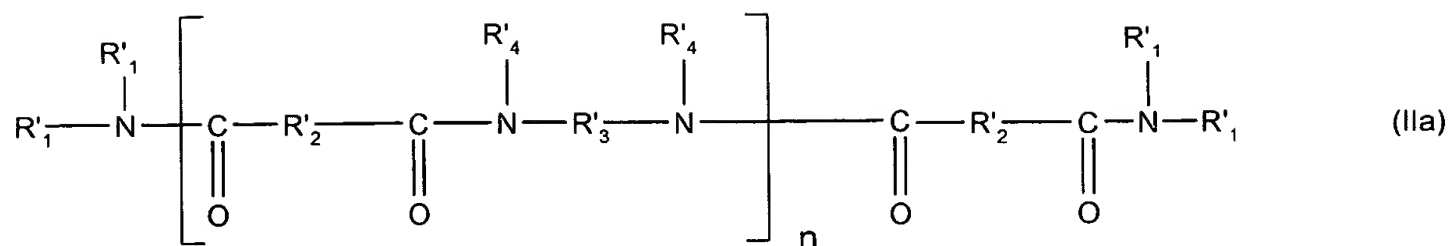
R'_4 , which are identical or different, are each independently chosen from hydrogen atoms, C_1 to C_{10} alkyl groups and a direct bond to at least one group chosen from R'_3 and another R'_4 , such that when the at least one group is chosen from another R'_4 , the nitrogen atom to which both R'_3 and R'_4 are bonded forms part of a heterocyclic structure defined in part by $R'_4-N-R'_3$, with the proviso that at least 50% of all R'_4 are chosen from hydrogen atoms; and

L represents a linking group, which is substituted by at least one R'_1 group as defined above.

48. The composition according to claim 47, wherein the at least one second polymer is chosen from polyamide polymers of formula (II) wherein L is a group of formula:



49. The composition according to claim 48, wherein the at least one second polymer is chosen from polyamide polymers of formula (IIa):



wherein:

n designates a number of repeating units such that terminal amide groups comprise from 10% to 50% of the total amide groups;

R'₁ at each occurrence is independently chosen from a C₁₋₂₂ hydrocarbon group;

R'₂ at each occurrence is independently chosen from a C₂₋₄₂ hydrocarbon group;

R'₃ at each occurrence is independently chosen from an organic group comprising at least two carbon atoms in addition to hydrogen atoms, and optionally comprising at least one atom chosen from oxygen and nitrogen atoms; and

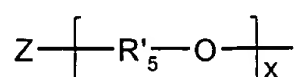
R'₄ at each occurrence is independently chosen from hydrogen, C₁₋₁₀ alkyl and a direct bond to R'₃ or another R'₄ such that the N atom to which R'₃ and R'₄ are both bonded is part of a heterocyclic structure defined in part by R'₄-N-R'₃.

50. The composition of claim 49, wherein R'₁, at each occurrence, is independently chosen from a C₄-C₂₂ hydrocarbon group.

51. The composition of claim 49, wherein R'₂, at each occurrence, is independently chosen from a C₄-C₄₂ hydrocarbon group.

52. The composition of claim 49, wherein R'₃, at each occurrence, is independently chosen from a C₂-C₄₂ hydrocarbon group, where at least 50% of the R'₂ groups comprise from 30 to 42 carbon atoms.

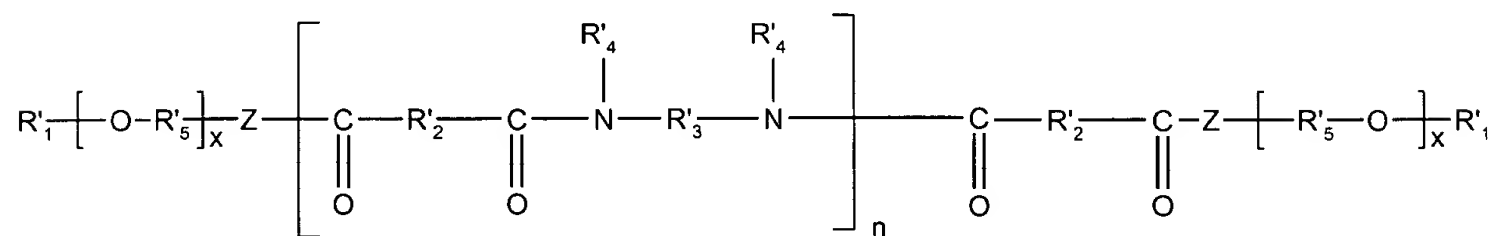
53. The composition according to claim 47, wherein the at least one second polymer is chosen from polyamide polymers of formula (II), wherein L is a group of formula:



wherein

- R'₅ is chosen from C₂-C₆ hydrocarbon diradicals;
- Z is chosen from O and NH; and
- x is an integer ranging from 2 to 100.

54. The composition according to claim 53, wherein the at least one second polymer is chosen from polyamide polymers of formula (IIb):



(IIb)

wherein

- R'₁, which are identical or different, are each independently chosen from C₁-C₂₂ alkyl and C₁-C₂₂ alkylene radicals;
- Z are chosen from O and NH;
- x is an integer ranging from 2 to 100;

R'_2 , which are identical or different, are each independently chosen from C_2 to C_{52} hydrocarbon diradicals, wherein at least 50% of the R'_2 comprise at least 34 carbon atoms;

R'_3 , which are identical or different, are each independently chosen from C_2 - C_{36} hydrocarbon diradicals and C_4 - C_{100} polyether diradicals;

R'_4 , which are identical or different, are each independently chosen from hydrogen atoms, C_1 to C_{10} alkyl groups and a direct bond to at least one group chosen from R'_3 and another R'_4 such that when at least one group is chosen from another R'_4 , the nitrogen atom to which both R'_3 and R'_4 are bonded forms part of a heterocyclic structure defined in part by R'_4 -N- R'_3 , with the proviso that at least 50% of all R'_4 are chosen from hydrogen atoms;

R'_5 are chosen from C_2 - C_6 hydrocarbon diradicals; and

n is an integer ranging from 1 to 10.

55. The composition according to claim 54, wherein Z is NH.

56. The composition according to claim 54, wherein R'_5 is a C_2 hydrocarbon diradical.

57. The composition according to claim 54, wherein at least 80% of the R'_2 diradicals comprise at least 34 carbon atoms.

58. The composition according to claim 54, wherein the R'_3 group is a polyether.

59. The composition according to claim 1, wherein the at least one first polymer is present in the composition in an amount ranging from 0.5% to 80% by weight relative to the total weight of the composition.

60. The composition according to claim 59, wherein the at least one first polymer is present in the composition in an amount ranging from 2% to 60% by weight relative to the total weight of the composition.

61. The composition according to claim 60, wherein the at least one first polymer is present in the composition in an amount ranging from 5% to 40% by weight relative to the total weight of the composition.

62. The composition according to claim 61, wherein the at least one first polymer is present in the composition in an amount ranging from 5% to 25% by weight relative to the total weight of the composition.

63. The composition according to claim 62, wherein the at least one first polymer is present in the composition in an amount ranging from 5% to 15% by weight relative to the total weight of the composition.

64. The composition according to claim 1, wherein the at least one second polymer is present in the composition in an amount ranging from 0.5% to 80% by weight relative to the total weight of the composition.

65. The composition according to claim 64, wherein the at least one second first polymer is present in the composition in an amount ranging from 2% to 60% by weight relative to the total weight of the composition.

66. The composition according to claim 65, wherein the at least one second first polymer is present in the composition in an amount ranging from 5% to 40% by weight relative to the total weight of the composition.

67. The composition according to claim 66, wherein the at least one second first polymer is present in the composition in an amount ranging from 5% to 25% by weight relative to the total weight of the composition.

68. The composition according to claim 67, wherein the at least one second first polymer is present in the composition in an amount ranging from 5% to 15% by weight relative to the total weight of the composition.

69. A composition according to claim 1, wherein the ratio of the at least one first polymer to the at least one second polymer ranges from 1/10 to 10/1.

70. A composition according to claim 69, wherein the ratio of the at least one first polymer to the at least one second polymer ranges from 1/5 to 5/1.

71. A composition according to claim 70, wherein the ratio of the at least one first polymer to the at least one second polymer ranges from 1/2 to 4/1.

72. A composition according to claim 71, wherein the ratio of the at least one first polymer to the at least one second polymer is 1/1.

73. A composition according to claim 70, wherein the ratio of the at least one first polymer to the at least one second polymer ranges from 4/1 to 5/1.

74. A composition according to claim 71, wherein the ratio of the at least one first polymer and the at least one second polymer is 3/1.

75. A composition according to claim 1, wherein the at least one first polymer has a softening point from 70 °C to 100 °C.

76. A composition according to claim 1, wherein the at least one second polymer has a softening point from 80 °C to 110 °C.

77. A composition according to claim 1, wherein the composition is free of wax.

78. The composition according claim 1, wherein the at least one liquid fatty phase of the composition comprises at least one oil chosen from at least one polar oil and at least one apolar oil, and wherein the at least one oil has an affinity for the at least one first polymer.

79. The composition according to claim 78, wherein the at least one polar oil is chosen from:

- hydrocarbon-based plant oils with a high content of triglycerides comprising fatty acid esters of glycerol, wherein the fatty acids comprise chains comprise from 4 to 24 carbon atoms, said chains being optionally chosen from linear and branched, and saturated and unsaturated chains;
- synthetic oils or esters of formula R_5COOR_6 , wherein R_5 is chosen from linear and branched fatty acid residues comprising from 1 to 40 carbon atoms, and R_6 is chosen from alkyl groups comprising from 1 to 40 carbon atoms, with the proviso that $R_5 + R_6 \geq 10$;
- synthetic ethers comprising from 10 to 40 carbon atoms;
- C_8 to C_{26} fatty alcohols; and

80. - C_8 to C_{26} fatty acids. The composition according to claim 78, wherein the at least one apolar oil is chosen from:

- silicone oils chosen from volatile and non-volatile, linear and cyclic polydimethylsiloxanes that are liquid at room temperature;

- polydimethylsiloxanes comprising alkyl or alkoxy groups, wherein each alkyl or alkoxy group is independently chosen from being pendant and being at the end of the silicone chain, and wherein the groups each comprise from 2 to 24 carbon atoms;
- phenylsilicones; and
- hydrocarbons chosen from linear and branched, volatile and non-volatile hydrocarbons of synthetic and mineral origin.

81. The composition according to claim 1, wherein the composition comprises at least one coloring agent chosen from pigments and dyes.

82. The composition according to claim 1, wherein the composition is in the form of a cosmetic composition.

83. The composition according to claim 82, wherein the composition is in the form of a treating shampoo product, a hair conditioning product, a sunscreen product, or a skin care formula.

84. The composition according to claim 82, wherein the composition is in the form of a colored make-up product for the skin, an eyeshadow, a concealer, an eyeliner, a make-up for the body, a nail varnish, a make-up for the lips, a make-up for eyelashes, and a make-up for the eyebrows.

85. The composition according to claim 84, wherein a make-up for the lips is chosen from lipgloss and lipstick.

86. The composition according to claim 1, wherein the composition is in a form chosen from an emulsion, an oil-in-water emulsion, a water-in-oil emulsion,

an oil-in-water-in-oil emulsion, a water-in-oil-in-water emulsion, a solid gel, a supple gel, and an anhydrous composition.

87. A make-up composition comprising

i) at least one liquid fatty phase:

ii) at least one first polymer comprising

a) a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one heteroatom, and

b) at least one terminal fatty chain that is bonded to the polymer skeleton via at least one ester linking group; and

iii) at least one second polymer comprising

a) a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one heteroatom, and

b) at least one terminal fatty chain that is bonded to the polymer skeleton via at least one linking group different from an ester group.

88. The composition according to claim 87, wherein the composition is in the form of a lipstick.

89. A method for care or make up of a keratin material chosen from lips, skin, and keratinous fibers, comprising applying to the keratin material a cosmetic composition comprising

i) at least one liquid fatty phase,

ii) at least one first polymer comprising a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one heteroatom, and

iii) at least one second polymer, different from the first polymer,
comprising

a) a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one heteroatom, and

b) at least one of:

- at least one terminal fatty chain chosen from alkyl chains and alkenyl chains, wherein the at least one terminal fatty chain is bonded to the polymer skeleton via at least one linking group; and
- at least one pendant fatty chain chosen from alkyl chains and alkenyl chains, wherein the at least one pendant fatty chain is bonded to the polymer skeleton via at least one linking group,

wherein the at least one first polymer and the at least one second polymer are each present in a sufficient amount to render the composition stable, and

wherein the at least one liquid fatty phase is structured by at least one of the at least one first polymer and the at least one second polymer.

90. A method for providing stability to a cosmetic composition comprising at least one liquid fatty phase, comprising including in the cosmetic composition:

ii) at least one first polymer comprising

a) a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one heteroatom, and

b) at least one of:

- at least one terminal fatty chain chosen from alkyl chains and alkenyl chains, wherein the at least one terminal fatty chain is bonded to the polymer skeleton via at least one linking group; and
- at least one pendant fatty chain chosen from alkyl chains and alkenyl chains, wherein the at least one pendant fatty chain is bonded to the polymer skeleton via at least one linking group, and

iii) at least one second polymer, different from the first polymer, comprising

a) a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one heteroatom, and

b) at least one of:

- at least one terminal fatty chain chosen from alkyl chains and alkenyl chains, wherein the at least one terminal fatty chain is bonded to the polymer skeleton via at least one linking group; and
- at least one pendant fatty chain chosen from alkyl chains and alkenyl chains, wherein the at least one pendant fatty chain is bonded to the polymer skeleton via at least one linking group.